| <br> | Claims |  |
|------|--------|--|
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| Application No. | Applicant(s)  | 4" |
|-----------------|---------------|----|
| 10/018,686      | ONISHI ET AL. |    |
| Examiner        | Art Unit      |    |

| / | Rejected | 1 | (Through numeral)<br>Cancelled |
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| = | Allowed  | ÷ | Restricted                     |

| N | Non-Elected  |
|---|--------------|
| _ | Interference |

Michael V Battaglia

| A | Appeal   |
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|              | ,                                |                                       |  |              |  |              |  | l              | 1                                     |          |          |          |
|--------------|----------------------------------|---------------------------------------|--|--------------|--|--------------|--|----------------|---------------------------------------|----------|----------|----------|
| 01           | .1                               | _                                     |  |              |  |              |  |                |                                       |          | <b>r</b> | Cla      |
| Cla          |                                  |                                       |  |              |  | Date         | <del>,</del>                                     |                | -т                                    | $\dashv$ |          | Cla      |
| Final        | Original                         | 8/17/04                               |  |              |  |              |  |                |                                       |          |          | Final    |
|              | 1                                | 1                                     |  |              |  |              |  |                |                                       |          |          |          |
|              | 1<br>2<br>3<br>4<br>5            | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ |  |              |  |              |  |                |                                       |          |          |          |
|              | 3                                | V                                     |  |              |  |              |  |                |                                       |          |          |          |
|              | 4                                | 4                                     |  |              |  |              |  |                |                                       |          |          |          |
|              | 5                                | 1                                     |  |              |  |              |  |                |                                       |          |          |          |
|              | 6<br>7                           | 1                                     |  |              |  |              |  |                |                                       |          |          |          |
|              |                                  | 1                                     |  |              |  |              |  |                |                                       | _        |          |          |
|              | 8<br>9                           | √                                     |  |              |  |              |  |                |                                       |          |          |          |
|              | 9                                | 1                                     |  |              |  |              |  |                | $\Box$                                |          |          |          |
|              | 10<br>11<br>12<br>13<br>14<br>15 | 1                                     |  |              |  |              |  |                | $\Box$                                |          |          |          |
|              | 11                               | 1                                     |  | Ш            |  | _            |  | _              |                                       |          |          |          |
|              | 12                               | _                                     |  |              |  | <u> </u>     | _  | _              |                                       |          |          |          |
|              | 13                               | ļ                                     |  |              | _  | ļ            |  | _              |                                       |          |          |          |
|              | 14                               | <u> </u>                              | <u> </u>   |              | _  |              |  |                |                                       |          | 100      |          |
|              | 15                               | <u> </u>                              |  |              |  | L            | _  |                |                                       |          |          |          |
|              | 16                               | ļ                                     | <u> </u>   |              | _  | <u> </u>     |  | <u> </u>       |                                       |          |          |          |
|              | 17                               | <u> </u>                              | _  | Ŀ            | Ŀ  | ┡            |  | _              |                                       |          |          |          |
|              | 18<br>19<br>20                   |                                       |  | _            | <u> </u>   | ļ            |  |                | $\sqcup$                              |          | - 1      |          |
|              | 19                               | <u> </u>                              | ļ  |              | _  | <u> </u>     |  |                |                                       |          |          |          |
|              | 20                               | <u> </u>                              | _  |              | ļ  | -            | <u> </u>   | <u> </u>       |                                       | _        |          |          |
|              | 21                               | -                                     | <u> </u>   |              |  | -            | _  | <u> </u>       | _                                     |          |          |          |
| <u> </u>     | 22<br>23<br>24<br>25             | ⊢                                     | -  | -            |  | <del> </del> | _  |                | Н                                     |          |          |          |
|              | 23                               | -                                     | ⊢  | -            | -  | -            | -  | -              |                                       |          |          |          |
| -            | 24                               | -                                     |  | -            |  | ⊢            |  | $\vdash$       | -                                     | -        |          |          |
| -            | 26                               | -                                     |  | -            | -  | ╁            | -  | -              | $\vdash$                              |          |          |          |
|              | 27                               | ┼                                     | ├  | -            |  | $\vdash$     | -  | ⊢              | -                                     | _        |          |          |
| -            | 27<br>28                         |                                       | ┢  | -            | ┢  | +-           | $\vdash$   | -              |                                       |          |          |          |
|              | 29                               | ┢                                     | ╁╾   | -            | -  | +            | -  |                | $\vdash$                              |          |          |          |
| -            | 30                               | ┼                                     | -  | $\vdash$     | -  | 1            |  | -              |                                       |          |          |          |
|              | 30<br>31                         | $\vdash$                              | <del>                                     </del> | ┢            |  | $\vdash$     |  | ┢              | _                                     | _        |          |          |
| <del> </del> | 32                               | ┼─                                    | -  | _            | <del>                                     </del> | $\vdash$     | -  | $\vdash$       | 1-                                    |          |          |          |
|              | 32<br>33                         | T                                     | $\vdash$   |              | m  | $\vdash$     | <del>                                     </del> | ╁              |                                       |          |          |          |
|              | 34                               | <del> </del>                          | 1  | 一            |  | $\vdash$     |  |                |                                       |          |          |          |
|              | 35                               | <b>†</b> ~~                           | 1  | ┢            |  |              | 1  |                |                                       |          | 30.      |          |
| -            | 36                               | T                                     |  | l            | ┢  | 1            |  | Τ              |                                       |          |          |          |
|              | 37                               |                                       | T  |              |  |              |  |                | П                                     |          |          |          |
|              | 38                               | Т                                     |  |              | <b> </b>   |              | Γ  |                |                                       |          |          |          |
|              | 39                               | 1                                     |  |              |  | Τ            |  |                |                                       |          |          |          |
|              | 40                               | Г                                     | Г  |              |  |              | Ī  |                |                                       |          |          |          |
|              | 41                               |                                       |  | Γ            |  |              |  |                |                                       |          |          |          |
|              | 42                               |                                       |  |              |  |              |  | L              | $\vdash$                              | _        |          |          |
|              | 43                               | _                                     |  | _            | L  | 1_           | _  | _              |                                       | _        |          | <u> </u> |
|              | 44                               |                                       |  | L            | L  | 1            | _  | _              |                                       |          |          |          |
|              | 45                               |                                       |  |              | _  | _            | 1_   | 1_             | ـــــــــــــــــــــــــــــــــــــ | _        |          |          |
|              | 46                               | _                                     | 1  | <u> </u>     | L  | 1_           | 1_   | 1              | <del> </del>                          | <u> </u> |          |          |
|              | 47                               | <u> </u>                              | 1  | 1_           | $\perp$  | $\perp$      | 1  | _              | $\vdash$                              |          |          | <u> </u> |
| <u></u>      | 48                               | 1                                     | ₽-   | <del> </del> | $\vdash$   | +            | 1_   | -              | <b> </b>                              | _        |          |          |
| <u></u>      | 49                               | ـ                                     | ــــ   | $\vdash$     | 1  | +-           | -  | <del> </del> — |                                       | _        | 1        |          |
| 1            | 50                               | 1                                     | 1  | 1            | 1  | 1            | 1  | 1              | 1                                     | 1        | 1:       | I        |

| CL           | aim                              |                 |   |            | г                                       | Date     |  |          |          | _            | i : : |
|--------------|----------------------------------|-----------------|---|------------|---|----------|--|----------|----------|--------------|-------|
| Cit          |                                  | r               |   |            |   | Jak      |  | Т        |          |              |       |
| Final        | Original                         |                 |   |            |   |          |  |          |          |              |       |
|              |                                  |                 |   |            |   |          |  | _        | _        |              |       |
|              | 51                               |                 |   |            |   |          | $\dashv$                               |          |          | -            |       |
|              | 51<br>52<br>53                   |                 |   | _          |   | _        | _                                      | _        | _        | _            |       |
|              | 53                               |                 |   |            |   |          |  | _        |          |              |       |
|              | 54                               |                 |   |            |   |          |  |          |          |              |       |
|              | 55                               |                 |   |            |   |          |  |          |          |              |       |
|              | 56                               |                 |   |            | ١.                                      |          |  |          |          |              |       |
|              | 57                               |                 |   |            |   |          |  |          |          |              | -     |
|              | 58                               |                 |   |            |   |          |  |          |          |              |       |
|              | 59                               |                 |   |            |   |          |  |          |          |              |       |
|              | 60                               |                 |   |            |   |          |  |          |          |              |       |
|              | 61                               |                 |   |            |   |          |  |          |          |              |       |
|              | 62                               |                 |   |            |   | Г        |  |          |          |              |       |
|              | 63                               |                 |   |            |   |          |  |          |          |              | :     |
|              | 64                               | $\Box$          |   |            |   |          |  |          |          |              | ::    |
| <del></del>  | 64<br>65                         |                 |   | _          | 一                                       | _        |  |          |          |              |       |
| <del> </del> | 66                               |                 | - |            |   |          |  |          |          |              |       |
| -            | 66<br>67                         | $\vdash$        | _ |            |   | -        |  |          | _        |              |       |
| <u> </u>     | 68                               | $\vdash$        |   |            | $\vdash$                                | -        | $\vdash$                               | -        |          | $\vdash$     | ŀ     |
|              | 69                               |                 | _ | _          | -                                       | ┢        | -                                      |          |          | -            | ŀ     |
|              | 70                               | $\vdash$        |   |            | ┢                                       |          | H                                      |          |          |              |       |
| -            | 70                               |                 |   |            |   | <b>├</b> | H                                      |          | _        | -            | -     |
| <u> </u>     | 71                               |                 |   |            |   | ⊢        |  |          | _        | -            |       |
|              | 12                               | $\vdash \vdash$ |   |            | -                                       | -        | $\vdash$                               |          |          | <u> </u>     |       |
|              | 70<br>71<br>72<br>73<br>74<br>75 | $\vdash \vdash$ |   |            | _                                       | -        | _                                      |          |          |              | ::    |
|              | 14                               |                 |   |            | ļ                                       | -        | <u> </u>                               |          |          |              | 1     |
|              | 75                               | $\vdash$        |   |            | ┢                                       | ├        | H                                      |          |          | ┝            |       |
|              | 76<br>77                         |                 | _ |            | <del> </del>                            | ⊢        | -                                      | _        | _        |              | 1     |
|              | 177                              | $\vdash$        |   | -          | ├-                                      |          | $\vdash$                               | -        | -        | $\vdash$     | 1     |
|              | 78                               |                 |   | _          | <u> </u>                                | ├        | ├                                      | -        | _        |              |       |
| ļ            | 79                               |                 | _ |            | -                                       | ⊢        | ļ                                      |          |          | -            |       |
| <u> </u>     | 80                               | $\vdash$        |   | _          | <u> </u>                                |          | ⊢                                      | _        |          | <u> </u>     | ŀ     |
|              | 81                               | Ш               |   |            | Ļ.,                                     | -        |  |          | _        | <u> </u>     | E     |
|              | 82                               |                 |   | <u>L</u> . | ļ                                       | _        | -                                      |          |          | <u> </u>     |       |
|              | 83                               |                 | _ | _          | _                                       | 1_       |  | <u> </u> | L_       | ļ            |       |
|              | 84                               |                 |   | _          | <u> </u>                                | <u> </u> | _                                      | <u> </u> | <u> </u> | L            | ŀ     |
|              | 85                               |                 |   |            |   | ┖        |  |          |          |              |       |
|              | 86                               |                 |   |            | _                                       | <u> </u> | <u> </u>                               | <u> </u> |          | _            | ŀ     |
|              | 87                               |                 |   | _          | <u> </u>                                | 1        | _                                      |          | _        | _            | ŀ.    |
|              | 88                               |                 |   |            | <u> </u>                                |          | ┖                                      | _        | <u> </u> | _            | 1     |
|              | 89                               |                 |   | L          | L                                       | ┺        | <u>Ļ</u>                               |          |          | _            |       |
| L            | 90                               |                 |   |            | <u> </u>                                | _        |  | _        | _        | <u> </u>     |       |
|              | 91                               |                 |   | _          | ┖                                       | <u> </u> | $ldsymbol{f eta}$                      |          | _        | _            | 1     |
|              | 92                               | $\bigsqcup$     |   | _          | 1_                                      | 1_       | <u> </u>                               | _        | <u>L</u> | _            | 1     |
| <u></u>      | 93                               |                 |   |            | L                                       | _        | $oldsymbol{oldsymbol{oldsymbol{eta}}}$ | <u> </u> | <u> </u> | _            | 1:    |
|              | 94                               | <u>L</u>        |   | _          | <u> </u>                                |          | 1                                      | L        |          | _            | 1     |
|              | 95                               |                 |   |            | سَّــــــــــــــــــــــــــــــــــــ | <u> </u> |  | _        | <u></u>  | _            | 1     |
|              | 96                               |                 | L |            |   |          |  |          |          | $oxed{oxed}$ |       |
|              | 97                               | L               | Ĺ | L          |   | $\perp$  |  |          |          |              | 1     |
|              | 98                               | ·               |   |            |   |          | L                                      |          | L        |              | 1     |
|              | 99                               | $\Box$          |   |            | L                                       |          | L                                      |          | _        | _            | 1     |
|              |                                  |                 |   |            |   |          |  |          |          |              |       |

| To   To   To   To   To   To   To   To   | Claim    |       |  |          |              | [        | Date     | •        |          |              | - 1          |
|---|----------|-------|--|----------|--------------|----------|----------|----------|----------|--------------|--------------|
| 103   |          |       |  |          |              |          |          |          |          |              |              |
| 103   |          | 101   |  |          |              |          |          |          |          |              |              |
| 103   |          | 102   |  |          |              |          |          |          |          |              |              |
| 105 106   107 108   109 110   111 112   113 114   115 116   117 118   119 120   121 122   123 124   125 126   127 128   129 130   131 132   133 134   135 136   137 138   139 140   141 142   143 144   145 146   147 148   149 149 |          | 103   |  |          |              |          |          |          |          |              |              |
| 105 106   107 108   109 110   111 112   113 114   115 116   117 118   119 120   121 122   123 124   125 126   127 128   129 130   131 132   133 134   135 136   137 138   139 140   141 142   143 144   145 146   147 148   149 149 |          | 104   |  |          |              |          |          |          |          |              |              |
| 107 108   109 110   111 111   112 113   114 115   116 117   118 119   120 121   122 123   124 125   126 127   128 129   130 131   132 133   134 135   136 137   138 139   140 141   142 143   144 145   146 147   148 149           |          | 105   |  |          |              |          |          |          | _        |              |              |
| 108 109   110 111   111 112   113 114   115 116   117 118   119 120   121 122   123 124   125 126   127 128   129 130   131 132   133 134   135 136   137 138   139 140   141 142   143 144   145 146   147 148   149 149           |          | 106   | _  |          |              |          |          |          | <u> </u> |              | Ш            |
| 109 110   111 112   113 114   115 116   117 118   119 120   121 122   123 124   125 126   127 128   129 130   131 132   133 134   135 136   137 138   139 140   141 142   143 144   145 146   147 148   149 149                     |          | 107   |  | _        |              |          | _        |          |          |              | _            |
| 110 111   111 112   113 114   115 116   117 118   119 120   121 122   123 124   125 126   127 128   129 130   131 132   133 134   135 136   137 138   139 140   141 142   143 144   145 146   147 148   149 149                     |          | 108   |  |          | ļ            |          | ļ        |          | <u> </u> |              | -            |
| 111 112   113 114   115 116   117 118   119 120   121 122   123 124   125 126   127 128   129 130   131 132   133 134   135 136   137 138   139 140   141 142   143 144   145 146   147 148   149 149                               |          | 109   | -  |          |              |          |          | $\vdash$ | <u> </u> | H            | $\vdash$     |
| 112   113   114   115   116   117   118   119   120   121   122   123   124   125   126   127   128   129   130   131   132   133   134   135   136   137   138   139   140   141   142   143   144   145   146   147   148   149   |          | 110   | _  |          |              |          | ┢        | <u> </u> |          | -            | $\vdash$     |
| 114 115   116 117   118 119   120 121   121 122   123 124   125 126   127 128   129 130   131 132   133 134   135 136   137 138   139 140   141 142   143 144   144 145   146 147   148 149   |          | 111   |  |          | -            | -        | -        | <u> </u> |          |              | Н            |
| 114 115   116 117   118 119   120 121   121 122   123 124   125 126   127 128   129 130   131 132   133 134   135 136   137 138   139 140   141 142   143 144   144 145   146 147   148 149   |          | 113   | $\vdash$   | $\vdash$ | -            | -        | -        | _        | -        | -            | -            |
| 116 117   118 119   120 121   122 123   124 125   126 127   128 129   130 131   132 133   133 134   135 136   137 138   139 140   141 142   143 144   145 146   149 149   |          | 114   | ┢  |          |              |          | ┢╾       |          | $\vdash$ | <del> </del> | Н            |
| 116 117   118 119   120 121   122 123   124 125   126 127   128 129   130 131   132 133   133 134   135 136   137 138   139 140   141 142   143 144   145 146   149 149   |          | 115   | _  | -        | -            | -        | ┢        | $\vdash$ |          |              |              |
| 117   118   119   120   121   122   123   124   125   126   127   128   129   130   131   132   133   134   135   136   137   138   139   140   141   142   143   144   145   146   147   148   149                                 |          | 116   | <del>                                     </del> | -        |              | -        | -        |          | T        |              |              |
| 119 120   121 122   123 124   125 126   127 128   129 130   131 132   133 134   135 136   137 138   139 140   141 142   143 144   145 146   149 149   |          | 117   |  |          | <del> </del> |          | $\vdash$ | ┢        | -        | -            | Н            |
| 119 120   121 122   123 124   125 126   127 128   129 130   131 132   133 134   135 136   137 138   139 140   141 142   143 144   145 146   149 149   |          | 118   | <u> </u>   |          | _            | Г        | Г        | -        |          |              | П            |
| 120   121   122   123   124   125   126   127   128   129   130   131   132   133   134   135   136   137   138   139   140   141   142   143   144   145   146   147   148   149   |          | l 119 |  |          |              |          |          |          |          |              |              |
| 123<br>124<br>125<br>126<br>127<br>128<br>129<br>130<br>131<br>132<br>133<br>134<br>135<br>136<br>137<br>138<br>139<br>140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149   |          | 120   |  |          |              | Г        |          |          |          | Γ            |              |
| 123<br>124<br>125<br>126<br>127<br>128<br>129<br>130<br>131<br>132<br>133<br>134<br>135<br>136<br>137<br>138<br>139<br>140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149   |          | 121   | Г  |          |              |          |          |          |          |              |              |
| 123<br>124<br>125<br>126<br>127<br>128<br>129<br>130<br>131<br>132<br>133<br>134<br>135<br>136<br>137<br>138<br>139<br>140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149   |          | 122   |  |          |              |          |          |          |          |              |              |
| 125   |          | 123   |  |          |              |          |          |          | <u> </u> |              |              |
| 128   |          | 124   |  | <u> </u> | <u> </u>     |          |          |          | L        | _            |              |
| 128   |          | 125   | _  | _        |              |          | L        | <u> </u> | _        |              |              |
| 128   |          | 126   | <u> </u>   | <u> </u> | <u> </u>     | ļ        | _        |          | _        |              |              |
| 130<br>131<br>132<br>133<br>134<br>135<br>136<br>137<br>138<br>139<br>140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149  |          | 127   | _  |          |              | _        | <u> </u> | ļ        |          | <u> </u>     | $\square$    |
| 130<br>131<br>132<br>133<br>134<br>135<br>136<br>137<br>138<br>139<br>140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149  |          | 128   | ├  |          |              | <u> </u> | ⊢        | ├—       | ├        | <u> </u>     |              |
| 131   |          | 129   | ┝  | -        | <u> </u>     | ├        |          | $\vdash$ | ⊢        | ⊢            | $\vdash$     |
| 132   | -        | 130   | <del> </del>                                     | -        |              | ⊢        | ┢        | -        | ⊢        | -            |              |
| 133   |          | 122   |  | $\vdash$ | $\vdash$     | ⊢        | $\vdash$ | ┢        | ├        | -            | -            |
| 135<br>136<br>137<br>138<br>139<br>140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149   | -        | 132   | $\vdash$   | $\vdash$ | $\vdash$     | $\vdash$ | ┢        | ╁        | -        |              | -            |
| 135<br>136<br>137<br>138<br>139<br>140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149   |          | 134   | $\vdash$   | ┢        |              |          | ├        | -        | ┼─       | ╁╾           |              |
| 136<br>137<br>138<br>139<br>140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149  |          | 135   | $\vdash$   | $\vdash$ | 1            | $\vdash$ | †        | $\vdash$ | $t^-$    | $\vdash$     | $\vdash$     |
| 138<br>139<br>140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149  | $\vdash$ | 136   | †  |          | T            | $\vdash$ | T        | $t^-$    | $\vdash$ | 1-           |              |
| 138<br>139<br>140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149  | l        | 137   | Т  |          | T            | Т        | T        | T        | 1        | Т            | П            |
| 140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149  |          | 138   | 1  | 1        | Т            | Г        | Π        | Г        |          | Γ            | Π            |
| 140<br>141<br>142<br>143<br>144<br>145<br>146<br>147<br>148<br>149  |          | 139   | 1  |          |              |          |          |          |          |              | ļ            |
| 141   |          | 140   |  |          |              |          |          |          |          | Г            |              |
| 143   |          | 141   |  |          |              |          |          |          |          |              |              |
| 144   |          |       | 1_   | L        | $\perp$      | Ĺ        | L        |          |          | $\perp$      | Ľ            |
| 145<br>146<br>147<br>148<br>149   |          |       | 1  |          | <u> </u>     | 1        | 1        | 1_       | 1        | _            | $\perp$      |
| 146<br>147<br>148<br>149  |          |       | _  | <u> </u> | 1            | ↓_       | ╙        | $\vdash$ | ╄        | _            | <u> </u>     |
| 147<br>148<br>149   |          |       | <u> </u>   | ↓_       | _            | ↓_       | 1_       | 1        | 1_       | <u> </u>     | <u> </u>     |
| 148   |          |       | _  | 1        | <del> </del> | <u> </u> | ╀-       | 1        | $\bot$   | 1_           | 1_           |
| 149   |          |       | <u> </u>   | <b>├</b> | $\vdash$     | ┼        |          | -        | +-       | ⊢            |              |
|   | -        |       | ╁  | -        | $\vdash$     | 1        | ╁        | ╁        | ┼-       | ┼-           | -            |
| 100   | <u> </u> |       | ┼  | ╀        | $\vdash$     | ╀        | +-       | ╁        | +        | $\vdash$     | <del> </del> |
|   | L        | 1 150 | 1  |          | <u> </u>     | _        | <u> </u> |          | 1        |              | Щ            |